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ABSTRACT

This paper is chapter 4 of the proceedings of the National Working Conference on Emerging Issues in Environmental Education. It concerns a survey sent to 300 U. S. environmental educators to determine their attitudes toward nine previously identified emerging issues in environmental education. The survey was sent before the conference to working environmental educators who had replied to a previous questionnaire and to individuals who had received a grant from the Office of Environmental Education in 1972 or 1973. The results were used to provide a comparison with the responses of the conference participants and to provide a data base of prevailing attitudes for environmental educators. The paper is divided into three sections which cover the questionnaire development, survey results, and comparison of survey results with conference participant results. The nine emerging issues on which the 45 survey statements are based are social justice, constituency, economics, autonomy, skills, formal education, local-global, values, and support systems. Respondents rated each statement according to agreeability and importance. Responses of the conference participants showed little difference with those of the survey respondents, despite the fact that the conference participants were chosen for their particular concern with the nine emerging issues. (MA)

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on

EMERGING ISSUES IN ENVIRONMENTAL EDUCATION

Proceedings

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CHAPTER FOUR

The Results of the Survey

The survey reported and analyzed in this chapter was undertaken in order to understand the attitudes of practicing environmental educators toward the nine emerging issues that were focused on at the 1974 University of Michigan National Conference on Emerging Issues in Environmental Education. The conference planners felt that such empirical information on such issues would be useful in:

1. Developing the conference working papers.
2. Focusing conference discussions.
3. Providing a means of comparing the attitudes of conference participants with those that characterize the field of environmental education.
4. Providing a data base for environmental educators concerning the attitudes that presently characterize the field.

This chapter is intended to fulfill the third and fourth of these goals.

The chapter is divided into three sections, as follows: (1) The development of the questionnaire, the characteristics of the sample, and the approach used for analysis and interpretation. (2) The results of the survey, analyzed and

discussed separately for each of the nine emerging issues. (3) A comparison of the survey results with the attitudes expressed on the same questionnaire by the twenty conference participants.

Procedures, Sample, and Analytic Method

In July of 1973, shortly after funding was granted to plan and run a national conference on environmental education, the conference staff mailed an open-ended questionnaire to working environmental educators. This preliminary questionnaire asked for suggestions on: (1) current issues to be resolved in environmental education; (2) emerging issues to be introduced; (3) little-known readings to be shared; and (4) exciting people--especially from outside the field--to be considered as possible participants. The questionnaire was sent to more than 300 environmental educators around the country, identified by the staff largely on the basis of William Stapp's personal mailing list. Completed questionnaires were returned by about 150 individuals. At the same time, the staff made its own assessment of the current debates and emerging issues in the field.

The debates and issues reported in the completed questionnaires, as well as those surfaced by the staff, led to the conclusion that the emerging issues incorporated most of the current debates, though from new perspectives.

The staff therefore decided to focus the conference, and the pre-conference research, on emerging issues in environmental education.

Using the questionnaire results as well as its own thinking, the staff developed a list of nine emerging issues, with one page of analysis and description for each issue. Nine research assistants were employed to begin preparing pre-conference position papers on the issues, based largely on the readings suggested in the questionnaires. At the same time, a second, more focused questionnaire was prepared, in consultation with the research assistants.

This second questionnaire consisted of 45 value statements about environmental education, five statements for each of the nine emerging issues. The statements were selected to reflect a wide range of perspectives regarding the issues. For each statement, respondents were asked to express their agreement or disagreement on a five-point scale, ranging from "certainly agree" to "certainly disagree." In addition, respondents were asked to judge the importance to environmental education of the issues raised by each statement, on a five-point scale ranging from "very important" to "very unimportant." A respondent's view of the professional relevance of each statement was thus measured independently of his or her opinion about the statement itself. Finally, the questionnaire included questions about age,

sex, years in environmental education, and principal area of practice within environmental education.

The questionnaire, as mailed to the respondents, is reproduced on the following pages.

EMERGING ISSUES IN ENVIRONMENTAL EDUCATION

Listed on the following pages are 45 statements of possible relevance to environmental education today and in the future. These statements have been written to reflect a wide range of viewpoints on issues that are being considered as possible topics for a national conference on "Emerging Issues in Environmental Education."

In order to make the conference as useful as possible to participants and to the field as a whole, we are trying to determine how people who are actively involved in environmental education feel about the 45 statements. The results of this survey will guide the final choice of issues for the conference, and will be published in the conference report.

We hope you will agree that the survey should prove valuable and that this questionnaire is worth filling out.

You are asked to respond to two attitude scales for each statement. The first scale concerns agreement or disagreement with the statement, ranging from 1 (certainly agree) to 5 (certainly disagree). The second scale asks how much importance for environmental education you see in the statement and the issues it raises for you, ranging again from 1 (very important) to 5 (very unimportant).

For example, if you felt a particular statement was certainly true but not at all important to you as an environmental educator, you might circle "1" for the first scale and "5" for the second. If another statement struck you as extremely important to environmental education though you were undecided as to its truth, you might circle "3" for the agreement scale and then "1" for the importance scale. If you felt a statement was totally in error but raised issues of moderate importance to environmental education, you might circle "5" and then "3".

Please circle only one number for each scale.

1. Environmental quality and social justice are essentially independent goals, both very important but without much connection between them.

   Certainly agree 1 2 3 4 5 Certainly disagree [111]

   Very important 1 2 3 4 5 Very unimportant [112]

2. One of the most important goals of environmental education is to try to reverse the environmental backlash and combat the public's dwindling commitment to environmental quality.

   Certainly agree 1 2 3 4 5 Certainly disagree [211]

   Very important 1 2 3 4 5 Very unimportant [212]

3. There is no essential contradiction between the goals of environmentalism and the American economic system; radical economic change is not required to achieve environmental quality.

   Certainly agree 1 2 3 4 5 Certainly disagree [311]

   Very important 1 2 3 4 5 Very unimportant [312]

4. A vital job for environmental education is to get people to understand the environment and how it works; environmental commitment and sensitivity will generally follow from environmental understanding.

   Certainly agree 1 2 3 4 5 Certainly disagree [411]

   Very important 1 2 3 4 5 Very unimportant [412]

5. Largely because of successful pre-service and in-service teacher education programs, most environmental educators already have a repertoire of relevant teaching skills sufficient for their needs; further skills training for environmental educators themselves is not a high priority.

   Certainly agree 1 2 3 4 5 Certainly disagree [511]

   Very important 1 2 3 4 5 Very unimportant [512]

6. It is important for environmental educators to devote much more time to working with factory workers, community officials, the elderly, and other adult audiences, perhaps through the mass media.

Certainly agree 1 2 3 4 5 Certainly disagree [611]

Very important 1 2 3 4 5 Very unimportant [612]

7. Since ecological principles are universal, and since international politics is complex and value-laden, it is wise to let the global context of environmental education emerge from the principles of ecology rather than from the details of international resource policy.

Certainly agree 1 2 3 4 5 Certainly disagree [711]

Very important 1 2 3 4 5 Very unimportant [712]

8. Environmental educators inevitably share some of the profoundly anti-environmental values of our society, making it enormously difficult to do the job that environmental education must do.

Certainly agree 1 2 3 4 5 Certainly disagree [811]

Very important 1 2 3 4 5 Very unimportant [812]

9. It is important for environmental education to be a diverse movement dominated by independent local efforts; it is dangerous to rely on national programs, standards, models, or support systems that could lead to centralization and standardization.

Certainly agree 1 2 3 4 5 Certainly disagree [911]

Very important 1 2 3 4 5 Very unimportant [912]

10. Too many environmentalists concentrate too much on issues such as wilderness preservation, instead of the more pressing environmental burdens on inner-city residents, poor people, etc.

Certainly agree 1 2 3 4 5 Certainly disagree [121]

Very important 1 2 3 4 5 Very unimportant [122]

11. The environmental movement should build far more alliances with traditionally powerful groups in our society, such as government, industry, and educational institutions.

Certainly agree 1 2 3 4 5 Certainly disagree [221]

Very important 1 2 3 4 5 Very unimportant [222]

12. Environmental quality probably cannot be achieved until developed countries like the United States give up or lose their disproportionate control over the economic benefits of the world's resources.

Certainly agree 1 2 3 4 5 Certainly disagree [321]

Very important 1 2 3 4 5 Very unimportant [322]

13. A goal of education--including environmental education--is to influence the student to become different in some particular way from what he or she was before.

Certainly agree 1 2 3 4 5 Certainly disagree [421]

Very important 1 2 3 4 5 Very unimportant [422]

14. Environmental educators should generally avoid teaching the sorts of skills that may attract learners to countercultural or "alternative" lifestyles or lead them to disparage the values of their own culture.

Certainly agree 1 2 3 4 5 Certainly disagree [521]

Very important 1 2 3 4 5 Very unimportant [522]

15. Environmental education cannot be fully accepted by school systems until national standards and models are developed and implemented--for teacher training, curricula, instructional tools, evaluation instruments, etc.

Certainly agree 1 2 3 4 5 Certainly disagree [621]

Very important 1 2 3 4 5 Very unimportant [622]

16. It is important for environmental education to look carefully at the political, economic, social, and environmental value system of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally, and internationally.

Certainly agree 1 2 3 4 5 Certainly disagree [721]

Very important 1 2 3 4 5 Very unimportant [722]

17. Environmentalism endures through its close link with traditional religious and cultural values; efforts to depict environmentalism as revolutionary are inaccurate and misguided.

Certainly agree 1 2 3 4 5 Certainly disagree [821]

Very important 1 2 3 4 5 Very unimportant [822]

18. Students should have substantial real control over the design and implementation of environmental education programs.

Certainly agree 1 2 3 4 5 Certainly disagree [921]

Very important 1 2 3 4 5 Very unimportant [922]

19. It is vital for environmental educators to learn how to motivate broad environmental awareness in minority and inner-city youth, who tend to be too little concerned about environmental quality.

Certainly agree 1 2 3 4 5 Certainly disagree [131]

Very important 1 2 3 4 5 Very unimportant [132]

20. Concern for endangered species is properly a high-priority issue for the environmental movement; the true environmentalist acts on behalf of all living things, not just people.

Certainly agree 1 2 3 4 5 Certainly disagree [231]

Very important 1 2 3 4 5 Very unimportant [232]

21. People just will not accept an "environmentalism" that demands a significant change in their economic standard of living or patterns of consumption, and it is self-defeating for the environmental movement or environmental education to promote these sorts of changes.

Certainly agree 1 2 3 4 5 Certainly disagree [331]

Very important 1 2 3 4 5 Very unimportant [332]

22. There is relatively little point in working to clarify the environmental values of a student unless those values, once clarified, are likely to be environmentally sound.

Certainly agree 1 2 3 4 5 Certainly disagree [431]

Very important 1 2 3 4 5 Very unimportant [432]

23. It is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with.

Certainly agree 1 2 3 4 5 Certainly disagree [531]

Very important 1 2 3 4 5 Very unimportant [532]

24. It is important for environmental educators to avoid approaches that are likely to threaten or challenge the school system, and concentrate on building and maintaining the acceptability of environmental education in the minds of those in authority.

Certainly agree 1 2 3 4 5 Certainly disagree [631]

Very important 1 2 3 4 5 Very unimportant [632]

25. Many environmental educators have inevitably been socialized and trained within an atmosphere of American provincialism that makes it very difficult to consider the earth as interrelated in a decisive way.

Certainly agree 1 2 3 4 5 Certainly disagree [731]

Very important 1 2 3 4 5 Very unimportant [732]

26. The environmental ethic deals essentially with attitudes toward the biophysical environment, and is neither founded on nor inconsistent with the fundamental social values of our society.

Certainly agree 1 2 3 4 5 Certainly disagree [831]

Very important 1 2 3 4 5 Very unimportant [832]

27. Although parents have a legitimate interest in their children's education, parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable.

Certainly agree 1 2 3 4 5 Certainly disagree [931]

Very important 1 2 3 4 5 Very unimportant [932]

28. Environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens.

Certainly agree 1 2 3 4 5 Certainly disagree [141]

Very important 1 2 3 4 5 Very unimportant [142]

29. A fundamental ethical problem confronting the environmental movement is that the movement tends to consider itself accountable to no one but itself, and has failed to respond adequately to the needs and wants of people outside the movement.

Certainly agree 1 2 3 4 5 Certainly disagree [241]

Very important 1 2 3 4 5 Very unimportant [242]

30. It is almost pointless for environmental education to consider the complex economic repercussions of environmental policies until we have first succeeded in arousing concern for environmental quality in students.

Certainly agree 1 2 3 4 5 Certainly disagree [341]

Very important 1 2 3 4 5 Very unimportant [342]

31. Students, like everyone, have a right to reject environmentalism, and environmental educators have an obligation to protect that right by avoiding propaganda, "behavior modification," or other manipulative approaches.

Certainly agree 1 2 3 4 5 Certainly disagree [441]

Very important 1 2 3 4 5 Very unimportant [442]

32. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems.

Certainly agree 1 2 3 4 5 Certainly disagree [541]

Very important 1 2 3 4 5 Very unimportant [542]

33. The most practical and satisfactory way to teach environmental education in the schools is as a separate discipline or specialty, perhaps within the sciences or social studies.

Certainly agree 1 2 3 4 5 Certainly disagree [641]

Very important 1 2 3 4 5 Very unimportant [642]

34. New organizations and new curriculum materials should be created that encourage both local and international approaches to the environment, instead of the current overemphasis on national problems in environmental education.

Certainly agree 1 2 3 4 5 Certainly disagree [741]

Very important 1 2 3 4 5 Very unimportant [742]

35. The values that environmental education can and should transmit are consistent with the values in the educational process as a whole, and thus need little special attention in designing environmental curricula.

Certainly agree 1 2 3 4 5 Certainly disagree [841]

Very important 1 2 3 4 5 Very unimportant [842]

36. It is vital for environmental educators to encourage increased funding by designing environmental education programs that will be attractive to government agencies, industry, and other potential sources of funds.

Certainly agree 1 2 3 4 5 Certainly disagree [941]

Very important 1 2 3 4 5 Very unimportant [942]

37. Environmental educators should be involved in pursuing social justice and exploring the social implications of potential environmental policies--certainly in the classroom and probably in the political arena as well.

Certainly agree 1 2 3 4 5 Certainly disagree [151]

Very important 1 2 3 4 5 Very unimportant [152]

38. The survival of humanity as a species is the ultimate goal of environmentalism, and must take precedence over the special needs or concerns of particular groups.

Certainly agree 1 2 3 4 5 Certainly disagree [251]

Very important 1 2 3 4 5 Very unimportant [252]

39. At least in the short run, environmental improvement will be to the economic disadvantage of many Americans, and environmentalists must devise ways of lessening the hardship, especially on the poor who are most vulnerable and least responsible for environmental degradation.

Certainly agree 1 2 3 4 5 Certainly disagree [351]

Very important 1 2 3 4 5 Very unimportant [352]

40. The advantage of "non-directive" teaching styles over more traditional styles is that they are better able to change the fundamental values of the learner; this makes them extremely valuable to environmental education, but only if the teacher can control the nature of the change.

Certainly agree 1 2 3 4 5 Certainly disagree [451]

Very important 1 2 3 4 5 Very unimportant [452]

41. Existing environmental education curricula are well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues.

Certainly agree 1 2 3 4 5 Certainly disagree [551]

Very important 1 2 3 4 5 Very unimportant [552]

42. In many ways environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system.

Certainly agree 1 2 3 4 5 Certainly disagree [651]

Very important 1 2 3 4 5 Very unimportant [652]

43. Environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena.

Certainly agree 1 2 3 4 5 Certainly disagree [751]

Very important 1 2 3 4 5 Very unimportant [752]

44. A high priority for environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

Certainly agree 1 2 3 4 5 Certainly disagree [851]

Very important 1 2 3 4 5 Very unimportant [852]

45. Community members of all sorts, from industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula.

Certainly agree 1 2 3 4 5 Certainly disagree [951]

Very important 1 2 3 4 5 Very unimportant [952]

Please check the items that apply to you:

Age:
( ) Under 25
( ) 25-34
( ) 35-44
( ) 45-54
( ) 55 or more

Principal field (check only one):
( ) Primary education
( ) Secondary education
( ) College or university education
( ) Curriculum planning
( ) Educational administration
( ) Other: _____

Sex:
( ) Male
( ) Female

Years in environmental education:
( ) Less than 2 years
( ) 2-5 years
( ) 6-10 years
( ) 11-20 years
( ) More than 20 years
( ) I am not in environmental education

Thank you for your help. We would welcome any additional comments on the questionnaire or the issues it raises. Please check the box on the cover page if you want a copy of the survey results.

The questionnaire was mailed to all individuals who had responded to the first questionnaire, and to all individuals who had received a grant from the Office of Environmental Education in 1972 or 1973. About 350 questionnaires were mailed out. The analysis presented here is based on the 199 completed questionnaires that were returned by early June, 1974.

Table 1 presents information on the age and sex of the respondents; the majority were over 30, and most were males. Table 2 presents information on the respondents' length of experience in environmental education, and their specialized field within environmental education. The vast majority had at least two years experience in the field; a high proportion were involved principally in curriculum planning, administration, or college teaching.

The analysis of this group's attitudes toward the 45 value statements will be based on four statistics for each statement:

1. The mean response to the "agreement" scale, indicating to what extent the group agreed or disagreed with the statement.
2. The standard deviation of responses to the "agreement" scale, indicating to what extent the group experienced consensus or dissensus in their opinions on the statement.
3. The mean response to the "importance" scale, indicating to what extent the group considered

TABLE 1

AGE AND SEX

Age Distribution of Respondents

Age	Percent of Sample Within Age Range
Under 25	4.5
25-34	22.4
35-44	36.3
45-54	21.9
55 or more	14.4
No Answer	.5

Sex Distribution of Respondents

Sex	Percent of Sample
Male	78.1
Female	14.9
No Answer	7.0

TABLE 2

EXPERIENCE AND SPECIALTY

Years in Environmental Education

Years of Experience	Percent of Sample in Given Category
Less than 2	6.5
2-5	35.3
6-10	21.4
11-20	16.4
More than 20	12.9
Not in Environmental Education	5.5
No answer	2.0

Specialized Fields

Principal Field	Percent of Sample in Given Category
Primary education	1.0
Secondary education	6.0
College or university education	30.8
Curriculum planning	11.9
Educational administration	15.4
Other	33.8
No answer	1.0

the statement (and the issues it raised) professionally important or unimportant.

4. The standard deviation of responses to the "importance" scale, indicating to what extent the group experienced consensus or dissensus in their views of the statement's professional importance.

To help focus attention on those statements that yielded the most interesting results, the range across all 45 statements for each of the four statistics was divided into quartiles. In other words, for each of the four statistics, the eleven or twelve statements that produced the most extreme responses in each direction were identified. Most of the discussion that follows will be based on these extreme responses; the "middle half" are noted in the tables but seldom discussed.

The following conventions, then, will be followed throughout this chapter (note that low numbers represent agreement rather than disagreement, and importance rather than unimportance):

1. Mean on "agreement": The eleven statements with means of 2.19 or less are referred to as those with which the respondents agreed. The eleven statements with means of 3.53 or more are referred to as those with which the respondents disagreed. The 23 statements with

means between 2.19 and 3.53 are not discussed.

2. Deviation on "agreement": The eleven statements with standard deviations of 1.12 or less are referred to as those on which the respondents experienced consensus (with respect to agreement). The eleven statements with standard deviations of 1.36 or more are referred to as those on which the respondents experienced dissensus. The 23 statements with standard deviations between 1.12 and 1.36 are not discussed.
3. Mean on "importance": The twelve statements with means of 1.83 or less are referred to as those that the respondents considered important. The eleven statements with means of 2.35 or more are referred to as those that the respondents considered unimportant. The 22 statements with means between 1.83 and 2.35 are not discussed.
4. Deviation on "importance": The eleven statements with standard deviations of .96 or less are referred to as those on which the respondents experienced consensus (with respect to importance). The eleven statements with standard deviations of 1.17 or more are referred to as those on which the respondents experienced dissensus. The 23 statements with standard deviations between .96 and 1.17 are not discussed.

This use of quartiles also permits analysis in terms of four additional categories, based on the standard deviations for the agreement scale and the means for the importance scale. When the extreme quartiles of these two statistics are cross-tabulated, the following categories result:

1. Ideology: Statements that are considered important, and on which there is consensus with respect to agreement.
2. New issue: Statements that are considered unimportant, and on which there is dissensus with respect to agreement.
3. Debate: Statements that are considered important, and on which there is dissensus with respect to agreement.
4. Dead issue: Statements that are considered unimportant, and on which there is consensus with respect to agreement.

In other words, if a statement is considered important to the field and there is consensus on its validity, then that statement is said to constitute part of the ideology of environmental education. If the respondents consider a statement unimportant and experience dissensus in their opinions on it, then it is viewed as a new issue to the field (or possibly an irrelevant one). If a statement is considered important but the respondents experience dissensus in their attitudes toward it, then it is interpreted as a living debate in the field.

And finally, if a statement is considered unimportant despite a consensus in attitudes toward it, then for environmental education it is a dead issue.

Before the analysis begins, one additional point should be made. Many of the 45 statements in the questionnaire represent complex value positions. A large number of respondents indicated that they had substantial difficulty determining their own position on particular statements, often because they agreed with part of a statement and disagreed with another part. This is entirely consistent with the real-world complexity of environmental issues and environmental attitudes, but it sometimes makes interpretation difficult. Readers should note that in many cases there is more than one possible reason why respondents may have disagreed with a statement. Since so many of the statements are multi-dimensional in this way, the project staff has not attempted to scale the 45 statements in any way, except according to the particular emerging issue to which each statement is connected.

Attitudes of the Respondents

In the analysis that follows, the 45 statements are first considered in groups of five, in terms of the emerging issue to which each statement is relevant. For each emerging issue, in order, the five relevant statements and the four statistics for each statement are presented in tabular form; those statistics that fall into an extreme quartile are

identified as such. The written discussion summarizes and interprets the results reported in the tables. After this issue-by-issue analysis, those of the 45 statements that qualify as ideology, debates, or new issues (there were no dead issues) are discussed again in that context.

As mentioned before, the comparison of the attitudes of the respondents with the attitudes of the conference participants will be saved for the third and final section of this chapter.

Social Justice. Looking first at the cluster of statements dealing with social justice (Table 3), we see two statements with which the respondents agreed. No. 19 says that it is vital for environmental educators to learn how to motivate environmental awareness in inner city youth. Respondents also experienced consensus on this value statement. No. 37 says that environmental educators should be pursuing social justice and the social implications of potential environmental policies in the classroom and probably in the political arena as well. There also was consensus with regard to agreement on this statement. Respondents as a group disagreed with the statement that environmental quality and social justice are independent issues, but there was not consensus on this matter. At the same time it is interesting to note the relatively low level of agreement with the statement that environmentalists concentrate too much on issues like wilderness preservation

TABLE 3

SOCIAL JUSTICE STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(1) environmental quality and social justice are independent goals	3.93 Disagree	1.33	2.01	1.23 Dissensus
(10) too much emphasis on wilderness preservation	2.42	1.28	1.91	.96 Consensus
(19) should learn to motivate environmental awareness in inner city youth	1.81 Agree	1.02 Consensus	1.83 Important	1.02
(28) deal with policy questions in terms of general public needs	3.07	1.39 Dissensus	2.41 Unimportant	.96 Consensus
(37) pursue social justice in the classroom and probably in the political arena	1.87 Agree	1.12 Consensus	1.97	1.04

instead of the more pressing environmental burdens on inner city residents, the poor, etc.

In looking at how respondents assessed the importance of these social justice statements, we see that only one was considered important--that environmental educators should be learning how to motivate environmental awareness in inner city youth. Low importance (and consensus on that low level of importance) was accorded to the idea that environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens.

Responses to both the agreement and the importance scales reveal two patterns. The position that environmental educators should learn to teach environmental awareness to inner city youth classifies as an ideology. That is, there was consensus with regard to agreement on this statement, and respondents accorded it high importance. The position that environmental educators should deal with policy issues in terms of general public needs rather than the needs of special groups classifies as a new issue. That is, there was dissensus with regard to agreement on this matter, and the respondents considered it unimportant.

Overall, then, environmental educators seem relatively uncritical of the way the field currently treats social justice issues. Although the respondents agreed that environmental quality and social justice are related goals, and

that environmental educators should pay attention to social justice, neither point was considered especially important. The important thing, according to the respondents, is to motivate environmental concern among inner city people--which apparently means concern for such issues as wilderness preservation. This seems to be a manifestation of the familiar pattern of concentrating on society's victims rather than on the social system that produces the victims. The goal of focusing environmental education more on the needs of oppressed people and the causes of their oppression was not rejected by the respondents; it was simply considered much less important (so far) than the goal of motivating oppressed people to be concerned about traditional environmental issues.

Constituency. The environmental educators in the survey agreed with two of the five questions asked about the constituency of environmentalism--No. 20, that the true environmentalist acts on behalf of all living things, not just people; and No. 11, that the environmental movement should build more alliances with traditionally powerful groups such as government, industry, and educational institutions. There was consensus that the true environmentalist acts on behalf of all living things. The responses to the other three constituency questions did not reach either "agreement" or "disagreement" levels. This is interesting

TABLE 4

CONSTITUENCY STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(2) goal of environmental education is to reverse environmental backlash and combat public's dwindling commitment to environmental quality	2.30	1.29	2.02	1.16 Dissensus
(11) environmental movement should build more alliances with traditionally powerful groups in society	1.93 Agree	1.13	1.83 Important	.96 Consensus
(20) true environmentalist acts on behalf of all living things, not just people	1.80 Agree	.92 Consensus	2.06	1.02
(29) environmental movement considers itself accountable to no one but itself and has failed to respond to needs and wants of people outside itself	2.72	1.31	2.29	1.11
(38) survival of humanity is ultimate goal of environmentalism and must take precedence over special needs of population groups	2.55	1.28	2.15	1.04

since these questions asked about whether a goal of environmental education is to combat environmental backlash, whether the environmental movement considers itself accountable only to itself, and whether the survival of humanity is the ultimate goal of environmentalism and should take over the special needs of particular groups.

Only one of the five questions was considered important by the respondents--that the environmental movement should build more alliances with traditionally powerful groups; there was consensus on the importance of this issue. The other four issues were considered intermediate in importance, though there was dissensus on the importance of fighting the environmental backlash.

Environmental educators, it seems, have not come to a definitive decision about the relationship of the survival of humanity to the special needs of particular groups, about whom the environmental movement is accountable to, or about whether environmental education should work to reverse environmental backlash. None of the five statements qualifies as an element of ideology, a new issue, a matter of debate, or a dead issue as we defined these terms earlier.

As environmental educators face the differentiation of interest groups in our society, the differences in power among those groups, and the consequent conflicts, their goals are to act on behalf of all living things and to seek alliances with traditionally powerful institutions. They

have no clear opinion on, and no strong interest in, the accountability of the environmental movement, the role of environmental education in the face of diminished social commitment to environmental quality, or the potential conflict between the survival of humanity and the special needs of particular groups.

Economics. The environmental educators in the sample disagreed with three of the five statements (see Table 5) pertaining to economics and environmental education, and agreed with none of them. They were in most disagreement with the idea that people will not accept an environmentalism that demands a significant change in their economic standard of living. They disagreed also with the assertion that there is no contradiction between the goals of environmentalism and the American economic system (but there was dissensus on this statement), and with the view that it is pointless for environmental education to consider the economic repercussions of environmental policies until it first succeeds in arousing concern for environmental quality.

In looking at how the respondents felt about the importance of these statements, we see that three out of five of the economics statements were judged important--that there is no contradiction between the goals of environmentalism and the American economic system, that people will not accept an environmentalism that demands a significant change in their

TABLE 5

ECONOMICS STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(3) no contradiction between goals of environmentalism and the American economic system	3.61 Disagree	1.36 Dissensus	1.75 Important	1.97 Dissensus
(12) environmental quality can't be achieved until developed countries like U.S. give up or lose disproportionate control over economic benefits of world resources	3.08	1.40 Dissensus	2.42 Unimportant	1.17 Dissensus
(21) people will not accept an environmentalism that demands a significant change in economic standard of living and self-defeating for environmental education to promote these changes.	3.72 Disagree	1.26	1.74 Important	.89 Consensus
(30) pointless for environmental education to consider economic repercussions of environmental policies until first succeeds in arousing concern for environmental quality.	3.53 Disagree	1.32	2.23	1.05

TABLE 5 (Continued)

ECONOMICS STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(39) in short run environmental improvement will be to economic disadvantage of many Americans, and environmentalists must devise ways of lessening hardship, especially on the poor	2.28	1.38 Dissensus	1.83 Important	.92 Consensus

economic standard of living, and that in the short run environmental improvement will be to the economic disadvantage of many Americans and environmentalists must devise ways of lessening this hardship. Respondents experienced dissensus on the importance of the first of these issues, consensus on the other two. One issue was considered unimportant by the respondents--that environmental quality can't be achieved until developed countries like the United States give up or lose their disproportionate control over the world's resources. There was dissensus about the low importance accorded this matter.

In looking at the results for both the "agreement" and the "importance" scales, we see that a new issue (dissensus with regard to agreement and low importance) to the field is that environmental quality can't be achieved until developed countries give up or lose their disproportionate control over the world's resources. Here is a matter closely related to the social justice issue discussed earlier, and here again the field has yet to establish a position or accord the matter very much importance. Two statements in this cluster qualify as debates (dissensus with regard to agreement and high importance--that there is no contradiction between the goals of environmentalism and the American economic system, and that short-run environmental improvement will be to the economic disadvantage of many Americans and environmentalists must devise

ways of lessening the hardship, especially on the poor.

Overall, then, environmental educators seem to regard economic issues as important to their field, but are still confused on how the field should deal with those issues. They see a conflict between environmentalism and the American economic system, but are not interested in U.S. domination over world resources as an environmental-economic issue. They believe that environmental education should consider the economic repercussions of environmental policies, and that it is possible and important to get people to accept environmentalism despite its potential negative impact on our standard of living, yet they are not entirely convinced that environmentalists must devise ways of lessening the hardship on the poor. One senses from these responses a value holding that the environment is everyone's problem and everyone's fault, and that Third World countries and poor people should be expected to bear the economic burden no less than developed countries and wealthy people.

Autonomy. The environmental educators in the sample agreed (see Table 6) that environmental education should get people to understand the environment and that commitment and sensitivity will follow. While the respondents did not agree or disagree on the other four statements in this area, there was dissensus with regard to agreement on two of the

TABLE 6

AUTONOMY STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(4) get people to understand the environment and how it works; commitment and sensitivity will follow from understanding	2.15 Agree	1.27	1.59 Important	.93 Consensus
(13) goal of environmental education is to influence the student to become different than he or she was before	2.35	1.47 Dissensus	2.26	1.33 Dissensus
(22) little point in clarifying student's environmental values unless these values, once clarified, are likely to be environmentally sound	3.30	1.62 Dissensus	2.08	1.08
(31) environmental educators have obligation to avoid propaganda, "behavior modification," or other manipulative approaches	2.23	1.24	2.10	1.01
(40) non-directive styles are better able to change the fundamental values of the learner, and are thus valuable to environmental education but only if teacher can control the nature of the change	3.24	1.26	2.61 Unimportant	1.18 Dissensus

statements--that the goal of environmental education is to influence the student to become different than he or she was before, and that there is little point in clarifying students' environmental values unless the values once clarified are likely to be environmentally sound.

Of the five statements in the autonomy cluster, only the one emphasizing that environmental education should get people to understand the environment was considered important, and there was consensus on its importance. That non-directive teaching styles are better able to change the fundamental values of the learner and are valuable only if the changes are controlled by the teacher was judged to be of low importance, but there was dissensus about this judgment of importance. None of the autonomy statements qualified as an ideology, a debate, a new issue, or a dead issue.

To the extent that environmental educators are concerned about issues of learner autonomy, then, it seems they put heavy stress on cognitive understanding and the faith that this understanding will lead to commitment and sensitivity. This was the only statement with which the respondents agreed, and the only one they considered important. Much more ambiguity emerged about the role of environmental education in trying to change the attitudes, values, or behaviors of learners. There was dissensus and not much importance attached to the question of whether

environmental education aims to change its students. In keeping with this, the respondents had no clear position on whether values clarification is useful even if it does not lead to sound environmental values, on the ethics of manipulative teaching, or on the role of teacher control in non-directive learning situations. A clear viewpoint and a high level of importance on such issues is apparently unnecessary for a group whose principal concern is the intellectual understanding acquired by students.

Skills. The responses to all five statements (see Table 7) pertaining to skills and environmental education were sufficiently extreme that it can be said that environmental educators either agree or disagree strongly with each statement. The respondents agreed that it is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and that environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action. There was consensus on both statements. The enviromental educators in the sample disagreed with the other three statements--that because of successful teacher education most environmental educators already have a repertoire of teaching skills sufficient for their needs; that existing environmental education curricula are well designed to encourage students to

TABLE 7

SKILLS STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(5) because of successful teacher education most environmental educators already have repertoire of teaching skills sufficient for their needs	4.32 Disagree	.95 Consensus	1.71 Important	1.05
(14) environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles	3.74 Disagree	1.30	2.55 Unimportant	1.21 Dissensus
(23) appropriate for environmental educators and their students to become deeply involved in community environmental controversies and help solve local environmental problems	1.49 Agree	.90 Consensus	1.45 Important	.69 Consensus
(32) environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action	1.59 Agree	.82 Consensus	1.65 Important	.81 Consensus
(41) existing environmental education curricula are well designed to encourage students to become knowledgable, skilled citizens active in community environmental issues	3.73 Disagree	1.05 Consensus	1.71 Important	.97

become knowledgeable, skilled citizens; and that environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles. For the first two but not the third of these disagreements there was consensus among the respondents.

All five of the statements pertaining to skills also qualified as either important or unimportant. The only statement accorded low importance (with dissensus about the judgment) was the one concerning the teaching of skills that attract learners to counter-cultural life styles. High importance was accorded the statements pertaining to involvement in community environmental controversies (with consensus among respondents), helping learners acquire environmental skills (with consensus among respondents), the education of environmental educators, and the design of existing environmental education curricula.

Looking at both the "agreement" and the "importance" scales for the five statements, we see that four of them qualify as elements of the ideology of environmental education (consensus on agreement and high importance). Only the statement about avoiding teaching skills that might lead to counter-cultural life styles does not qualify as part of the ideology.

It is clear from these responses that environmental educators consider skills issues extremely important, and have a well-articulated viewpoint on those issues. The

respondents agreed that they and their students should be deeply involved in community environmental controversies, and that more effort should be devoted to helping students acquire skills for effective action; both statements were also considered important. At the same time, the respondents asserted that environmental educators do not now have an adequate repertoire of teaching skills, and that current curricula do an inadequate job of helping students become knowledgeable, skilled, active citizens on environmental issues--and these statements were considered important as well. Environmental educators, in short, are dissatisfied with their own skills and the skills they are now imparting to students, and are committed to doing a better job in the future of involving themselves and their classes in effective local environmental action.

Formal Education. The environmental educators studied (see Table 8) agreed that it is important for environmental educators to devote more time to working with factory workers, community officials, the elderly, and other adult audiences, perhaps through the mass media. Furthermore, there was consensus on this matter. They disagreed with two statements--that environmental education can't be fully accepted by school systems until national standards are developed and implemented, and that the most practical and satisfactory

TABLE 8

FORMAL EDUCATION STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(6) important for environmental educators to devote more time to adult audience, perhaps through mass media	1.98 Agree	1.08 Consensus	1.98	1.01
(15) environmental education can't be fully accepted by school systems until national standards and models are developed and implemented	3.84 Disagree	1.27	2.55 Unimportant	1.29 Dissensus
(24) important for environmental educators to avoid approaches that are likely to threaten or challenge the school system	3.48	1.28	2.11	1.03
(33) most practical and satisfactory way to teach environmental education in the schools is as a separate discipline	4.19 Disagree	1.13	2.03	1.22
(42) environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system	3.25	1.47 Dissensus	2.18	1.18 Dissensus

way to teach environmental education in the schools is as a separate discipline.

None of the five statements pertaining to formal education was considered important. Only one was considered unimportant (and there was dissensus on that)--the need for national standards for environmental education.

Looking at both the "agreement" and the "importance" scales, we see that for environmental education none of these statements qualifies as an element of ideology, a matter of debate, a new issue, or a dead issue.

It is interesting to note that the respondents neither agreed nor disagreed with the assertion that it is important for environmental educators to avoid approaches that are likely to threaten or challenge the school system. Also, they did not consider this an important issue. When asked whether environmental education required challenging and changing the structure and process of the typical American school system, again the respondents neither agreed nor disagreed, and again they did not consider the issue important (though there was dissensus on both judgments).

From these data we see that environmental educators don't want environmental education taught as a separate discipline, don't feel a need for national standards, and don't care enormously about either issue. They want to pay more attention to adults, but don't think that's especially important either. They are not conceptually clear about

whether or not their job requires challenging and changing the structure and process of the typical American school system, nor are they conceptually clear about whether they should or should not avoid approaches that are likely to threaten the school system; neither issue is considered important. It seems that the environmental educators questioned do not have (and do not feel they need) a clear strategy or set of tactics for introducing and developing environmental education in school systems.

Local-Global. The environmental educators studied (see Table 9) agreed with two of the five local-global statements-- that it is important for environmental education to look carefully at the political, economic, social, and environmental value system of this country and to analyze the impact of these cultural assumptions on environmental quality, locally, nationally, and internationally; and that new organizations and curriculum materials are needed that encourage both local and international approaches to the environment, instead of the current overemphasis on national problems. There was consensus on both statements. On a closely related issue, the respondents disagreed with the statement that environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena.

TABLE 9

LOCAL-GLOBAL STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(7) let the global context of environmental education emerge from the principles of ecology rather than from details of international resource policy	3.10	1.36 Dissensus	2.20	1.08
(16) environmental education should look carefully at the political, economic, social and environmental value system of this country	1.29 Agree	.69 Consensus	1.35 Important	.69 Consensus
(25) many environmental educators are trained in atmosphere of American provincialism that makes it difficult to consider the earth as interrelated in a decisive way	2.67	1.29	2.51 Unimportant	1.14
(34) new materials and organizations should be developed, stressing local and international approaches instead of national ones	2.19 Agree	1.06 Consensus	2.27	1.01
(43) environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena	3.53 Disagree	1.13	2.35 Unimportant	.95

The only statement judged to be of high importance was that environmental education should look carefully at the value system of this country and analyze its impact on environmental quality. Low importance was accorded to two statements--that many environmental educators have inevitably been socialized and trained within an atmosphere of American provincialism that makes it very difficult to consider the earth as interrelated in a decisive way, and that too much stress is put on local issues as opposed to regional and national phenomena.

In looking at both the "agreement" and the "importance" scales, we see that one statement constitutes an element of the ideology of environmental education. This is the assertion that environmental education should look carefully at the value system of this country and analyze its impact on environmental quality.

From these responses it is clear that environmental educators would like to see more attention paid to both local and international issues. The respondents agreed with the statement that more local and international materials and organizations are needed, and disagreed with the statement that too much stress is now put on local issues instead of regional and national ones. However, neither statement was considered important, and the second one qualified as unimportant. Local versus global perspectives are apparently an issue that does not preoccupy environmental educators

very much, except for one aspect of it: the need to examine the environmental impact of American values.

Although the respondents were firmly committed to looking carefully at environmental value systems in this country, they were uncertain whether the global context of environmental education should emerge from ecological principles or from an explicit examination of international resource policy (from biophysical or from sociopolitical consideration). And they had no opinion in either direction about the effects of American provincialism on the training of environmental educators; this issue was considered unimportant. Environmental educators, in other words, are not yet concerned about the limits of their own education and values as these might affect their efforts to teach from a global perspective.

Values. The environmental educators questioned agreed with none of the five values statements, and disagreed with two (see Table 10)--that the environmental ethic deals essentially with attitudes toward the biophysical environment and is neither founded on nor inconsistent with the fundamental social values of our society, and that the values environmental education should transmit are consistent with the values in the educational processes as whole and thus need little special attention in designing environmental curricula.

TABLE 10

VALUES STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(8) environmental educators inevitably share some of the profoundly anti-environmental values of our society	2.60	1.24	2.50 Unimportant	1.24 Dissensus
(17) environmentalism endures through its close link with traditional religious and cultural values	3.23	1.41 Dissensus	2.57 Unimportant	1.23 Dissensus
(26) environmental ethic deals essentially with attitudes toward the biophysical environment and is not inconsistent with fundamental social values of our society	3.82 Disagree	1.34	1.94	1.10
(35) values environmental education should transmit are consistent with values in educational process as a whole	3.74 Disagree	1.24	2.03	1.02
(44) high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones	3.00	1.48 Dissensus	2.42 Unimportant	1.28 Dissensus

These two statements were considered neither important nor unimportant. The other three were judged to be of low importance to the group of environmental educators questioned, though in each case there was dissensus about this judgement. The following statements ranked as unimportant: (1) environmental educators inevitably share some of the profoundly anti-environmental values of our society; (2) environmentalism endures through to its close link with traditional religious and cultural values, and efforts to depict environmentalism as revolutionary are inaccurate and misguided; and (3) a high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

An examination of both the "agreement" and the "importance" scales shows that two of the values statements qualify as new issues (dissensus on agreement and low importance)--that environmentalism endures through its link with traditional religious and cultural values, and efforts to depict environmentalism as revolutionary are inaccurate and misguided; and that a high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones.

Environmental educators, in short, understand and believe that the environmental ethic is not isolated from

fundamental social values, and see some inconsistency between the values to be transmitted by environmental education and the values inherent in the educational process as a whole. They are only beginning to consider the link between environmentalism and traditional values, and the role of environmental education in undermining established values and inculcating new ones. They have no clear opinion on whether their own values share the society's anti-environmental bias. And they do not yet consider any of these issues especially important.

Support System. Of the five statements dealing with the support system for environmental education (see Table 11), the respondents disagreed with none and agreed with only one--that community members of all sorts should participate in the design and implementation of environmental education curricula. There was consensus on this matter.

The participation of community members in the design and implementation of environmental education was also judged to be highly important, and there was consensus on that judgment. One statement was considered unimportant--that parental opposition should not be allowed to scuttle environmental education innovations.

In examining both the "agreement" and the "importance" scales, we see that the need for community participation

TABLE 11

SUPPORT SYSTEM STATEMENTS

Number and Description	Mean Agree	Deviation Agree	Mean Important	Deviation Important
(9) environmental education should be a diverse movement dominated by independent local efforts	2.90	1.38 Dissensus	2.15	.95 Consensus
(18) students should have substantial real control over design and implementation of environmental education programs	2.55	1.19	2.29	1.02
(27) parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable	2.53	1.20	2.48 Unimportant	1.08
(36) to encourage increased funding environmental educators should design programs that will be attractive to governmental agencies, industry, etc.	2.57	1.33	2.19	1.08
(45) community members of all sorts should participate in the design and implementation of environmental education curricula	1.77 Agree	1.07 Consensus	1.73 Important	.93 Consensus

qualifies as an element of the ideology of environmental education. None of the other statements qualified as an ideology, a new issue, a debate, or a dead issue.

The statement that students should have substantial real control over the design and implementation of environmental education programs achieved neither agreement nor disagreement, neither importance nor unimportance. The same was true of the statement that environmental educators should encourage increased funding by designing programs that would be attractive to government agencies, industry, etc. There was dissensus over whether or not environmental education should be a diverse movement dominated by independent local efforts; this issue, too, was judged neither important nor unimportant.

In summary, there seems to be a great deal of unclarity among environmental educators about the character of the support system for environmental education. Beyond agreement that community members of all kinds should participate in the design and implementation of curricula, respondents had no clear opinion about the role of student control, the role of possible parental opposition, the desired impact of funding sources, or whether environmental education should be a diverse movement dominated by independent local efforts. Except for broad-based community participation, these support system issues are not considered very important.

So far we have examined the survey responses only in terms of the nine emerging issues. In the process, we have identified some statements that qualified as matters of ideology, as debates, as new issues, or as dead issues. Another way of understanding the attitudes of environmental educators toward the emerging issues is to consider these four categories separately, across all nine emerging issues. No statements on the questionnaire qualified as dead issues (consensus on agreement and low importance). We turn now to the results for the other three categories.

Ideologies. Looking first at the category of ideology (see Table 12), we see that seven statements fell within this category. For a statement to qualify for inclusion here, there had to be consensus on agreement (the standard deviation on the agreement scale had to be in the lowest quartile) and the statement had to be judged high in importance to environmental education (the mean on the importance scale had to be in the lowest quartile).

A major area of ideology seems to be the relationship of environmental education to the community. In this regard the respondents believed with consensus and considered it important that:

1. It is appropriate for environmental educators and their students to become deeply involved in community

TABLE 12

"IDEOLOGY" STATEMENTS

5. Largely because of successful pre-service and in-service teacher education programs, most environmental educators already have a repertoire of relevant teaching skills sufficent for their needs; further skills training for environmental educators themselves is not a high priority. (Disagree, Consensus, High Importance)

16. It is important for environmental educators to look carefully at the political, economic, social, and environmental value systems of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally, and internationally. (Agree, Consensus, High Importance)

19. It is vital for environmental educators to learn how to motivate broad environmental awareness in minority and inner city youth, who tend to be too little concerned about environmental quality. (Agree, Consensus, High Importance)

23. It is appropriate for environmental educators and their students to become deeply involved in community environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with. (Agree, Consensus, High Importance)

32. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems. (Agree, Consensus, High Importance)

41. Existing environmental education curricula are well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues. (Disagree, Consensus, High Importance)

45. Community members of all sorts, from industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula. (Agree, Consensus, High Importance)

environmental controversies, and to identify, publicize, and attempt to help solve local environmental problems that are not being dealt with.

2. Existing environmental education curricula are not well designed to encourage students in becoming knowledgeable, skilled citizens active in community environmental issues.

3. Community members of all sorts, from local industry leaders to local environmental activists, should participate in the design and implementation of environmental education curricula.

4. Environmental educators should devote more effort to helping learners acquire relevant environmental skills, so that students will be able to take effective action to deal with environmental problems.

These areas of ideology indicate commitment to an unusual goal in American public education--involvement of students and teachers in community controversies as active participants. It is not surprising that existing curricula are not considered adequate to achieve such a goal, and that additional training for students in action-related skills is seen as essential. To meet these needs environmental educators are committed to another unusual practice for American public education--involving community members of all sorts in the design and implementation of environmental education curricula.

A second area of ideology in environmental education pertains to the environmental educators themselves. It is a matter of ideology that environmental educators, because of insufficient pre-service and in-service training, lack a repertoire of relevant teaching skills sufficient for their needs, and that further skills training for environmental educators is thus a high priority. It is also a matter of ideology that environmental educators should learn how to motivate environmental awareness in minority and inner city youth.

A third area of ideology pertains to the analysis on which environmental education rests. The ideology is that it is important for environmental educators to look carefully at the political, economic, social, and environmental value systems of this country, and to analyze the impact of these cultural assumptions on environmental quality locally, nationally and internationally.

Debates. Only two of the 45 statements (see Table 13) qualified as debates. For a statement to qualify for inclusion, there had to be dissensus on agreement and the statement had to be judged high in importance.

Both of the statements that qualified pertain to the economic considerations that underlie the diagnosis and solution of environmental problems. There was dissensus among environmental educators on whether or not there is an

TABLE 13

"DEBATE" STATEMENTS

3.	There is no essential contradiction between the goals of environmentalism and the American economic system; radical economic change is not required to achieve environmental quality. (Disagree, Dissensus, High Importance)
39.	At least in the short run, environmental improvement will be to the economic dissadvantage of many Americans, and environmentalists must devise ways of lessening the hardship, especially on the poor who are most vulnerable and least responsible for environmental degradation. (Dissensus, High Importance)

essential contradiction between the goals of environmentalism and the American economic system, and whether radical economic change will be required to achieve environmental quality. Despite the dissensus, the balance of opinion was that an essential contradiction does exist and that radical economic change will be required. The short-term meaning of this situation was also a matter of debate. There was dissensus among environmental educators on whether, at least in the short run, environmental improvement will be to the economic disadvantage of many Americans, and whether environmentalists must devise ways of lessening this hardship, particularly on the poor.

An interesting contrast emerges between these two debates on the one hand, and the elements of ideology discussed earlier on the other hand. Part of the ideology of environmental education, according to the survey results, is the involvement of environmental educators and their students in community controversies, and the involvement of community people in environmental education. Yet there is debate as to whether the goals of such involvement require radical change in the American economic system, and whether environmental improvement will be to the disadvantage of certain groups whose hardship must be lessened. These debates encompass areas of great potential conflict between entrenched powers and disadvantaged, the rich and the poor. As environmental educators work for increasing

community involvement, they will be under pressure to develop a firm position on such conflicts. The nature and extent of the interaction between environmental education and the community will depend largely on how the field finally resolves (and helps students to resolve) these debates.

New Issues. The last category of statements to be examined are the new issues. Four of the 45 statements (see Table 14) qualify as new issues. For a statement to qualify for this category, there had to be dissensus on agreement and the statement had to be considered of low importance.

In these new issues we find further evidence that environmental education has yet to grapple with the relationship between environmental quality and social conflict. Three of the four new issues concern this fundamental problem--whether environmental quality requires that the United States lose its disproportionate control over the world's resources; whether environmentalism is tied to traditional values or is revolutionary; and whether environmental education should deal with general public needs or the specialized needs of particular groups. For all three statements, the respondents could not agree on a position, and considered the issue unimportant.

TABLE 14

"NEW ISSUE" STATEMENTS

12.	Environmental quality probably cannot be achieved until developed countries like the United States give up or lose their disproportionate control over the economic benefits of the world's resources. (Dissensus, Low Importance)
17.	Environmentalism endures through its close link with traditional religious and cultural values; efforts to depict environmentalism as revolutionary are inaccurate and misguided. (Dissensus, Low Importance)
28.	Environmental education should deal with policy questions mostly in terms of general public needs, not the specialized needs or wants of particular cultural, ethnic, or other groups of citizens. (Dissensus, Low Importance)
44.	A high priority for environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones. (Dissensus, Low Importance)

Involvement in community environmental controversies--a goal that is part of the current ideology of environmental education-- inevitably means involvement in conflict between interest groups. As a field, environmental education has not yet recognized this inevitability, and has not yet begun to consider which groups it will support and which it will oppose. The implications of this pending decision are staggering; it will profoundly affect the support system for environmental education, its approach to skills training, values, and constituency, its orientation toward social justice and economics, etc.

The fourth new issue, that environmental education should try to undermine established values and inculcate new ones, is also related to the question of intergroup conflict. As long as environmental educators do not fully believe that environmentalism is a societal battle, they will see no need to change people's values. And as long as they take no side in that battle, they will be unable to determine which values need changing, and in which directions. Under these constraints can environmental education become a part of the solution, rather than a part of the problem?

As of 1974, environmental educators are committed to playing an active role in environmental controversies, but are reluctant to choose a side. This is an unstable

position, and it will change. The question is how soon, and in what direction. Will environmental education try to create for itself a niche as neutral "mediator" in environmental conflicts? Will it withdraw from those conflicts and return to traditional, fact-oriented teaching? Or will it engage in those conflicts as an open partisan, fighting for environmental quality and social justice for all people? That is, perhaps, the most basic emerging issue in environmental education.

Comparison with Conference Participants.

The final section of this chapter compares the survey results just discussed with the responses to the same questionnaire of the twenty conference participants. The participants completed the questionnaire Monday evening, before beginning the conference but after reading the pre-conference papers. The differences found may thus reflect either the sorts of people who attended the conference as opposed to those in the larger sample, or the impact of the pre-conference papers, or both.

As a group, the conference participants were signifigantly younger than the general sample and had fewer years of experience in environmental education. More of the participants were women, and more were members of minority groups. Although a number of conference participants were long-time leaders in environmental education, just as many

came to the conference from tangential fields.

In the analysis that follows, we will once again consider the 45 statements in groups of five, according to which of the nine emerging issues each statement was intended to illuminate. For each statement, four means are presented in tabular form--first the "agreement" scale for both the larger sample and the conference participants, then the "importance" scale for the larger sample and the participants. Differences between the two samples are marked with an asterisk (*) if the t-test was significant at the .10 level of confidence, and with a double asterisk (**) if it was significant at the .01 level of confidence. These significant differences are interpreted in the discussion that accompanies the tables.

In examining the tables, the reader should bear in mind that low numbers represent agreement rather than disagreement, and importance rather than unimportance.

Social Justice. The participants (see Table 15) consistently accorded greater importance to the statements dealing with social justice than did the sample of environmental educators who responded to the questionnaire prior to the conference. The difference between these two groups was large enough to be statistically significant for two statements, concerning the interdependence of environmental quality and social justice, and the need for

TABLE 15

SOCIAL JUSTICE COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(1) environmental quality and social justice are independent goals	3.93	4.33	2.01	1.17**
(10) too much emphasis on wilderness preservation	2.42	1.83*	1.91	1.60
(19) should learn to motivate environmental awareness in inner city youth	1.81	2.17	1.83	1.59
(28) deal with policy questions in terms of general public needs	3.07	4.00**	2.41	2.11
(37) pursue social justice in the classroom and probably in the political arena	1.87	1.41*	1.97	1.47*

*significant at $p < .10$

**significant at $p < .01$

environmental educators to pursue social justice.

In terms of their agreement with the statements, the participants consistently adopted more of a "social justice position" than the larger sample. The differences were statistically significant for three statements--that there has been too much emphasis on wilderness preservation versus the environmental burdens of inner city residents, that environmental education should deal with policy questions in terms of the specialized needs of subpopulations as opposed to general public needs, and that environmental educators should pursue social justice in the classroom and probably the political arena.

Constituency. While the two groups (see Table 16) did not differ significantly in their judgments on the importance of the constituency statements, the conference participants did as a general pattern accord more importance to these statements than the larger sample of environmental educators.

The participants agreed significantly less than the larger sample with the statement that the environmental movement should build more alliances with the traditionally powerful groups in society, and also with the statement that the true environmentalist acts on behalf of all living things, not just people. From these differences we see that the participants were more comfortable than the larger sample

TABLE 16

CONSTITUENCY COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(2) goal of environmental education is to reverse environmental backlash and combat public's dwindling commitment to environmental quality	2.30	2.33	2.02	2.17
(11) environmental movement should build more alliances with traditionally powerful groups in society	1.93	2.56*	1.83	1.72
(20) true environmentalist acts on behalf of all living things, not just people	1.80	2.35*	2.06	1.94
(29) environmental movement considers itself accountable to no one but itself and has failed to respond to needs and wants of people outside of itself	2.72	2.61	2.29	2.06
(38) survival of humanity is ultimate goal of environmentalism and must take precedence over special needs of particular groups	2.55	2.82	2.15	1.94

*significant at $p < .10$
**significant at $p < .01$

with the idea that environmentalism involves conflict with the power structure of society, and an emphasis on the needs of people.

Economics. On the subject of economics (see Table 17), two statements were considered more important by the conference participants than by the larger sample--the contradiction between environmentalism and the American economic system, and the need for developed countries to give up their control over world resources.

The participants also had significantly different opinions on both statements. That is, they believed more strongly than the larger sample that the goal of environmental quality is incompatible with both the U.S. economic system and the developed countries' control of world resources. In addition, the participants agreed to a greater extent than the larger sample that environmental improvement will work economic hardship on the poor and that environmentalists should be responsible for lessening the burden.

Autonomy. The conference participants considered two statements significantly more important than the larger sample of environmental educators (see Table 18)--that the goal of environmental education is to influence the student to become different, and that it is important to use non-directive styles because of their effectiveness, but only

TABLE 17

ECONOMICS COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(3) no contradiction between goals of environmentalism and the American economic system	3.61	4.39*	1.75	1.22*
(12) environmental quality can't be achieved until developed countries like U.S. give up or lose disproportionate control over economic benefits of world's resources	3.08	2.11**	2.42	1.44
(21) people will not accept an environmentalism that demands a significant change in economic standard of living and self defeating for environmental education to promote these changes	3.72	3.78	1.74	2.06
(30) pointless for environmental education to consider economic repercussions of environmental policies until first succeeds in arousing concern for environmental quality	3.53	3.76	2.23	2.12
(39) in short run environmental improvement will be to economic disadvantage of many Americans, and environmentalists must devise ways of lessening hardship, especially on the poor	2.28	1.65*	1.83	1.47

*significant at $p < .10$
**significant at $p < .01$

TABLE 18

AUTONOMY COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(4) get people to understand the environment and how it works; commitment and sensitivity will follow from understanding	2.15	2.56	1.59	1.72
(13) goal of environmental education is to influence the student to become different than he or she was before	2.35	1.89	2.26	1.33**
(22) little point in clarifying students' environmental values unless these values, once clarified, are likely to be environmentally sound	3.30	3.44	2.08	1.89
(31) environmental educators have obligation to avoid propaganda, "behavior modification", or other manipulative approaches	2.23	2.71	2.10	1.88
(40) non-directive styles are better able to change the fundamental values of the learner and are thus valuable to environmental education but only if teacher can control the nature of the change	3.24	3.71	2.61	1.86*

*significant at $p < .10$
**significant at $p < .01$

when the teacher can control the nature of the change. In general, except for statement No. 4, the participants considered learner autonomy more important than the larger sample did.

In terms of the level of agreement with this set of learner autonomy statements, the two samples did not differ significantly on any statement. However, the overall pattern of differences seemed to indicate that the participants were more inclined to see the role of the environmental educator as an agent of change with the student as the target of change.

Skills. There were no significant differences (see Table 19) between the two samples on the importance they accorded to skills training considerations in environmental education.

One statement produced a significant difference in agreement. The participants disagreed more strongly than the larger sample with the statement that environmental educators should avoid teaching the sorts of skills that might attract learners to counter-cultural life styles. The other differences in agreement were very small.

Formal Education. Among the questionnaire statements focusing on formal education (see Table 20), the two samples differed significantly on the importance of only one. The conference participants judged as more important the issue of whether fundamental school system change is

TABLE 19

SKILLS COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(5) because of successful teacher education most environmental educators already have repertoire of teaching skills sufficient for their needs	4.32	4.28	1.71	1.78
(14) environmental educators should avoid teaching the sorts of skills that may attract learners to counter-cultural life styles	3.74	4.50	2.55	2.17
(23) appropriate for environmental educators and their students to become deeply involved in community environmental controversies and help solve local environmental problems	1.49	1.56	1.46	1.61
(32) environmental educators should devote more effort to helping learners acquire environmental skills so students can take effective action	1.59	1.47	1.65	1.41
(41) existing environmental education curricula are well designed to encourage students to become knowledgeable skilled citizens active in community environmental issues	3.73	3.59	1.71	1.71

*significant at $p < .10$
**significant at $p < .01$

TABLE 20

FORMAL EDUCATION COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(6) important for environmental educators to devote more time to adult audience, perhaps through mass media	1.98	1.72	1.98	1.67
(15) environmental education can't be fully accepted by school systems until national standards and models are developed and implemented	3.84	3.61	2.55	2.56
(24) important for environmental educators to avoid approaches that are likely to threaten or challenge the school system	3.48	3.72	2.11	1.94
(33) most practical and satisfactory way to teach environmental education in the schools is as a separate discipline	4.19	4.63*	2.03	1.75
(42) environmental education is so different from most school subjects that it will be impossible to do the job effectively without challenging and changing the structure and process of the typical American school system	3.25	2.00**	2.18	1.59*

*significant at $p < .10$
**significant at $p < .01$

needed in order to teach environmental education effectively.

The participants disagreed more than the larger sample of environmental educators with the statement that the most satisfactory and practical way to teach environmental education is as a separate discipline. In addition, the participants as opposed to the larger sample were significantly more in agreement with the statement that for environmental educators to do the job effectively they must challenge and change the structure and process of the typical American school system.

Local-Global. The participants at the conference and the larger sample of environmental educators (see Table 21) did not differ significantly in their assessment of the importance of the five local-global questionnaire statements.

In only one case did the two samples differ significantly in their level of agreement with a statement. The participants registered a significantly higher level of agreement than the larger sample with the statement that new materials and organizations should be developed that stress local and international issues as opposed to national approaches to environmental education.

Values. The participants saw one statement (see Table 22) as significantly more important than the larger sample--that environmental education should devise better ways to undermine established anti-environmental values and inculcate environmentally sound ones.

TABLE 21

LOCAL-GLOBAL COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(7) let the global context of environmental education emerge from the principles of ecology rather than from details of international resource policy	3.10	3.44	2.20	1.94
(16) environmental education should look carefully at the political, economic, social and environmental value system of this country	1.29	1.39	1.35	1.39
(25) many environmental educators are trained in atmosphere of American provincialism that makes it difficult to consider the earth as interrelated in a decisive way	2.67	2.56	2.51	2.56
(34) new materials and organizations should be developed, stressing local and international apprcaches instead of national ones	2.19	1.59*	2.27	2.00
(43) environmental education often puts too much stress on local issues instead of concentrating on more important regional and national phenomena	3.53	3.12	2.35	2.35

*significant at $p < .10$
**significant at $p < .01$

TABLE 22

VALUES COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(8) environmental educators inevitably share some of the profoundly anti-environmental values of our society	2.60	2.17*	2.50	2.28
(17) environmentalism endures through its close link with traditional religious and cultural values	3.23	3.29	2.57	2.39
(26) environmental ethic deals essentially with attitudes toward the biophysical environment and is not inconsistent with fundamental social values of our society	3.82	3.89	1.94	2.28
(35) values environmental education should transmit are consistent with values in educational process as a whole	3.74	3.82	2.03	2.06
(44) high priority of environmental education should be to devise better ways to undermine established anti-environmental values and inculcate new environmentally sound ones	3.00	2.13*	2.42	1.69*

*significant at $p < .10$
**significant at $p < .01$

Similarly, the participants agreed with this statement at a significantly higher level than the larger sample. The participants agreed more with one additional statement as well--that environmental educators inevitably share some of the profoundly anti-environmental values of our society.

Support System The participants judged one statement as significantly more important than the larger sample (see Table 23)--that students should have substantial control over environmental education programs.

The participants also agreed with this statement to a significantly greater extent than the larger sample. Two other significant differences of opinion emerged--the participants were more willing to let parental opposition scuttle environmental education programs, and they were less in favor of designing programs that are attractive to government agencies and industry in order to gain additional funding for environmental education.

When we look at the overall differences for all 45 statements, a consistent pattern emerges. The conference participants, as a group, were less traditional in their diagnosis of environmental problems and their goals for environmental education than the larger sample of environmental educators. They were more inclined to see environmentalism and environmental education as inevitably and appropriately involved in conflict with the established

TABLE 23

SUPPORT SYSTEM COMPARISON

Number and Description	Agreement		Importance	
	Field	Conf.	Field	Conf.
(9) environmental education should be a diverse movement dominated by independent local efforts	2.90	3.00	2.15	2.22
(18) students should have substantial real control over design and implementation of environmental education programs	2.55	1.89*	2.29	1.83*
(27) parental opposition to environmental education innovations should not be permitted to scuttle programs that professional environmental educators consider valuable	2.53	3.06*	2.48	2.28
(36) to encourage increased funding environmental educators should design programs that will be attractive to government agencies, industry, etc.	2.57	3.25*	2.19	2.56
(45) community members of all sorts should participate in the design and implementation of environmental education curricula	1.77	1.82	1.73	2.06

*significant at $p < .10$
**significant at $p < .01$

order--conflict over social justice, over economic and international issues, and over values. And they were more responsive to the implications of conflict--implications for the environmental movement's constituency and support system, for the skills offered to students and the autonomy accorded them, and for the relationship between environmental education and traditional education.

Even more obviously, the conference participants were more interested in the nine emerging issues than the larger sample. Of the nine statements on which the two samples reached significant differences in their judgments of importance, all nine differences were in the same direction: The conference participants thought the statement more important than the larger sample. Out of a total of 45 statements, 31 (69 percent) were considered more important by the participants than by the larger sample; only 12 were considered more important by the larger sample, and two pairs of means were identical.

However, it is at least as vital to bear in mind that only nine statements produced differences in importance judgments that were statistically significant at the .10 level of confidence. And only 17 statements produced significant differences in agreement. For the majority of the statements, in other words, the two samples were not far apart in their views on the statement or in their assessments of its importance.

When one considers that the conference participants were selected largely on the basis of demonstrated interest in the emerging issues, while the larger sample was selected largely on the basis of successful grant applications to the Office of Environmental Education, the small size of the differences between them is indeed striking. The mainstream of professional success in environmental education is not so very different from the cutting edge of attention to the emerging issues. This is a conclusion that should be enormously encouraging to both groups.